

## **Bridging the Vocabulary Gap for Students who use AAC**

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### **Short Abstract**

This research investigated the accessibility of mental health and wellbeing vocabulary for primary-school aged students in South Australia who use Augmentative and Alternative Communication (AAC) systems. By comparing the vocabulary used in the Australian Curriculum with that available in commonly prescribed AAC systems (PODD and Proloquo2Go), the study identified gaps in vocabulary representation.

Five teachers from South Australia provided the mental health and wellbeing vocabulary used in their classrooms. This data was cross-referenced with the Australian Curriculum and Glossary to create a comprehensive list. Subsequently, a thorough audit of the AAC systems' vocabulary libraries (Boardmaker PCS 7 for PODD and Symbolstix for Proloquo2Go) was conducted. Concepts and words not adequately represented were identified.

In collaboration with a nationally renowned artist with communication access needs and a local artist, new symbols were co-designed to address these gaps. These symbols, specifically tailored for classroom use, aim to enhance the accessibility of mental health and wellbeing vocabulary for primary-school students who rely on AAC.

### **Long Abstract**

Almost 1 in 7 (14%) children and adolescents aged 4-17 years in Australia are estimated to experience a mental health condition in any given year (Australian Institute of Health and Welfare, 2023). In 2018, 357,500 (7.7%) of children under 15 years were reported as having disability (Australian Bureau of Statistics, 2020). In 2015, there were 278,100 children with disability in Australia, of whom almost half (46%) had some level of communication disability. The majority (86.45%) of these children had profound or severe communication disability (Australian Bureau of Statistics, 2020). Many children with communication disability use AAC. As communication is an interpersonal construct, the provision of a communication system alone is not adequate for successful participation (Light, 2019). Effective intervention must target the whole communicative environment and be implemented in real-world contexts, rather than only focussing on the person who uses AAC (Beukelman & Light, 2020). As part of this approach, AAC systems usually incorporate graphic symbols to represent vocabulary, providing an important visual aid for communication. In fact, visual aid is shown to be highly beneficial for vocabulary learning, not only for students with communication disability, but for all students (Beukelman & Light, 2020; Notley & Bell, 2023). However, there are gaps in the vocabulary standardly available in commonly prescribed AAC systems (Watson et al., 2021; Wilkinson et al., 2021). This is because vocabulary selection is often dependent on family members, educators, and health professionals, especially for children and adolescents with communication access needs (Beukelman & Light, 2020). The standard core-vocabulary available in commonly prescribed AAC systems is based on studies on vocabulary used by typically developing children, as well as broad consultation with key stakeholders regarding the vocabulary children/person's with communication access needs should be able to use. Often, AAC users are not involved in this decision-making process regarding AAC systems. As a result, many

important words and phrases may be overlooked, leaving gaps in their communication tools. This issue become particularly significant when considering topics like mental health and wellbeing. Although education on mental health and wellbeing is integrated in the Australian Curriculum, students with communication disability may not have access to relevant mental health vocabulary. In turn, they may be excluded from key learning of this curriculum, and opportunity to discuss their own or others' mental health and wellbeing outside the classroom. This could have detrimental life-long impacts on students' sense of autonomy, emotional competence and wellbeing (Lawrence et al., 2015).

To our knowledge, this is the first study to conduct a comprehensive audit of mental health and wellbeing vocabulary in the Australian Curriculum and compare it to the vocabulary available in commonly prescribed, commercially available AAC systems in Australia, including the Pragmatic Organisation of Dynamic Display (PODD®) and the Proloquo2Go®. thousands of words, there are still gaps in the vocabulary available to students who rely on AAC compared with their same-age peers who use speech. This is largely due to the fact that AAC systems come with a set of standard vocabulary, and further personalisations often dependent on the input of family members, educators, and allied health professionals.

This pilot study used a sequential mixed-methods exploratory arts-based design. Five teachers provided vocabulary they use when teaching the 'Personal, Social and Community Health' strand of the Australian Curriculum (for one or more-year levels) by completing an online, open-ended survey. This data was cross-referenced with the Australian Curriculum and Glossary to create a comprehensive list. Subsequently, a thorough audit of the AAC systems' vocabulary libraries (Boardmaker PCS 7 and Symbolstix) was conducted, and concepts and words not adequately represented were compared and identified. Thematic analysis was used to review vocabulary types and word classes. Then, a comprehensive mental health and wellbeing vocabulary set that aligns with the 'Personal, Social and Community Health' strand of the Australian Curriculum was developed in collaboration with speech pathology and education academics and professionals. Finally, an arts-based methodology and universal design principals were used to co-design visual illustrations with a well-known artist who uses AAC and a local artist to represent key concepts and vocabulary related to mental health and wellbeing that were not observed within these AAC systems. This resource will be made available to the public including education sectors, with the overarching aim to improve the accessibility of mental health and wellbeing vocabulary for all students. Findings from this study will provide the groundwork for larger projects to investigate and evaluate the use and effectiveness of arts-infused products in this respect.

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